

WHAT IS CLAIMED IS:

1                   1.       An anastomosis device comprising:  
2                   a component configured to be secured to a vessel and having an opening adapted  
3 to be placed in fluid communication with a lumen of the vessel;  
4                   wherein the component comprises a material having the ability to produce or be  
5 attracted by a magnetic field; and  
6                   wherein the component is configured to be secured to the vessel substantially  
7 without any fixation structure being present in the vessel lumen.

1                   2.       The device of claim 1, wherein the component is configured to be secured  
2 to the vessel without any fixation structure being present in the vessel lumen.

1                   3.       The device of claim 1, wherein the component has a surface configured to  
2 be secured to the vessel wall by adhesive.

1                   4.       An anastomosis device comprising:  
2                   a component having a portion configured to be adhered to a wall of a vessel by  
3 biocompatible adhesive to define a blood flow path into the vessel; and  
4                   wherein the component is configured to be secured to the vessel wall by an  
5 additional, nonadhesive-based attachment mechanism.

1                   5.       The device of claim 4, wherein the portion of the component and the  
2 attachment mechanism are configured to secure the component to the vessel without any fixation  
3 structure being present in the vessel lumen.

1                   6.       The device of claim 4, wherein the component comprises a material  
2 having the ability to produce or be attracted by a magnetic field.

1                   7.       An anastomosis device comprising:  
2                   a component configured to be secured to a vessel and having an opening adapted  
3 to be placed in fluid communication with a lumen of the vessel;

wherein the component comprises a material having the ability to produce or be attracted by a magnetic field; and

wherein the component has a portion that is at least partially curved.

8. The device of claim 7, wherein the component is configured to be secured to the vessel wall by an adhesive.

9. A method for forming an anastomosis comprising:  
(a) providing a first vessel with a first anastomotic component;  
(b) providing a second vessel with a second anastomotic component; and  
(c) coupling the first and second anastomotic components to place their lumens in fluid communication;  
(d) wherein at least one of steps (a) and (b) is performed at least in part by securing the anastomotic component to the vessel using adhesive.

10. The method of claim 9, wherein step (c) is performed at least in part by using magnetic force to couple the anastomotic components.